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Chapter 28

The policyscape as a conceptual framework to study the combination of conservation and development policies in the territory: the case of Mexico

Driss Ezzine-de-Blas and Céline Dutilly

Mexico was one of the first countries in Latin America to implement a national programme for payments for environmental services (PSA-H) to protect forests that play a role in regulating the country's hydrological services (Muñoz-Piña *et al.*, 2008). Since 2003, this programme has covered more than 2 million hectares of forests through contracts between the government – as represented by the National Forestry Commission (Conafor) – and rural communities. Under the terms of the contract, the latter undertake to conserve forests in exchange for annual payments for five years. The programme has cut the deforestation rate by some 45% and has also contributed to reducing the poverty of the participating families (Alix-García *et al.*, 2015). The programme's professed aim, in the course of its implementation, is not only to curb deforestation, but also to provide an alternative for rural development in marginal forest areas.

Attempting to achieve two objectives with one instrument constitutes a problem of policy configuration that depends on the territory's dynamics of governance and socio-ecological characteristics (Tinbergen, 1956). A set or mix of policies is needed when – as in the Mexican rural context – several constraints and uncertainties affect the implementation of the programme, such as conflicts over property rights, behaviour that imperils the programme, or inadequate State access to information (Goulder and Parry, 2008). The spatial expression of this policy mix in the territory – protected areas, payments for environmental services, support for forest management and community enterprises – is known as the policyscape (Barton *et al.*, 2013). However, the application of a political instrument in a territory is not a purely technocratic and aseptic process: the multi-level governance of the concerned programme is also part of this policyscape. In particular, even though the role of intermediaries or rural technicians is fundamental, it is poorly known: their choices will steer the

spatialization of the programmes, for example, via the selection of participants (Schomers *et al.*, 2015). Moreover, the spatial distribution of an instrument evolves during the different phases of a public policy cycle (Primmer *et al.*, 2011) with adaptations made by various actors as and when they are included in the decision-making space (Alix-García *et al.*, 2015). In this chapter, we present a study of a case which is implementing the concept of the decisional landscape in the course of a public policy cycle, using the example of Mexico's PSA-H. Our presentation here is limited to the salient points of a larger research study (Ezzine-de-Blas *et al.*, 2016).

The policyscape in a multi-level governance

To understand the multi-level governance of the Mexican PSA-H programme, we must explore the articulation by government and non-government actors of their various interests in the course of the policy cycle (Figure 28.1). The definition of the objectives and the configuration of the rules of operation, the identification of funding sources and the implementation of the programme are phases of the policy cycle determined by formal and informal governance networks, where informal spaces for alliances and negotiations will determine their outcome (Mermet, 2011). In the case of the national PSA-H programme, multi-level dynamics are involved in three successive phases: the selection of eligible areas, the definition of selection criteria and the choice of community forests that will submit applications to Conafor. Eligible areas of the territory are the spatial corset from which communities can potentially apply to the programme.

Subsequently, the forest plots submitted to Conafor are evaluated using a points system that classifies the applicants. The selection criteria are determined at the federal level by a multi-actor commission composed of public, private and civil society organizations. Negotiations to configure this system, which ranks the programme's community forests, pits one group of actors who wish to prioritize economic efficiency criteria (risk of deforestation, hydrological vulnerability) against another that lays stress on social and environmental criteria (poverty indicators, presence of community development plans, biodiversity corridors). This confrontation resulted, between 2006 (the year of setting up of the commission) and 2010 (the year of consolidation of the criteria), in a significant reduction in the economic criteria in favour of social and environmental criteria; the latter now account for 80% of the total rating weightage as against 56% in 2006 (Muñoz-Piña *et al.*, 2011). Finally, rural technicians are responsible for submitting the community applications to Conafor, so it is their choices that ultimately determine the socio-economic and ecological characteristics of the territory where the payments will take place.

The consequences of the choice of selection criteria at the national level to address the risk of deforestation

Using a national survey of 324 farming and forest communities, Ezzine-de-Blas *et al.* (2016) analyze how PSA-H fits into the mix of development and conservation policies in terms of the threat of deforestation, a spatially explicit variable, and how

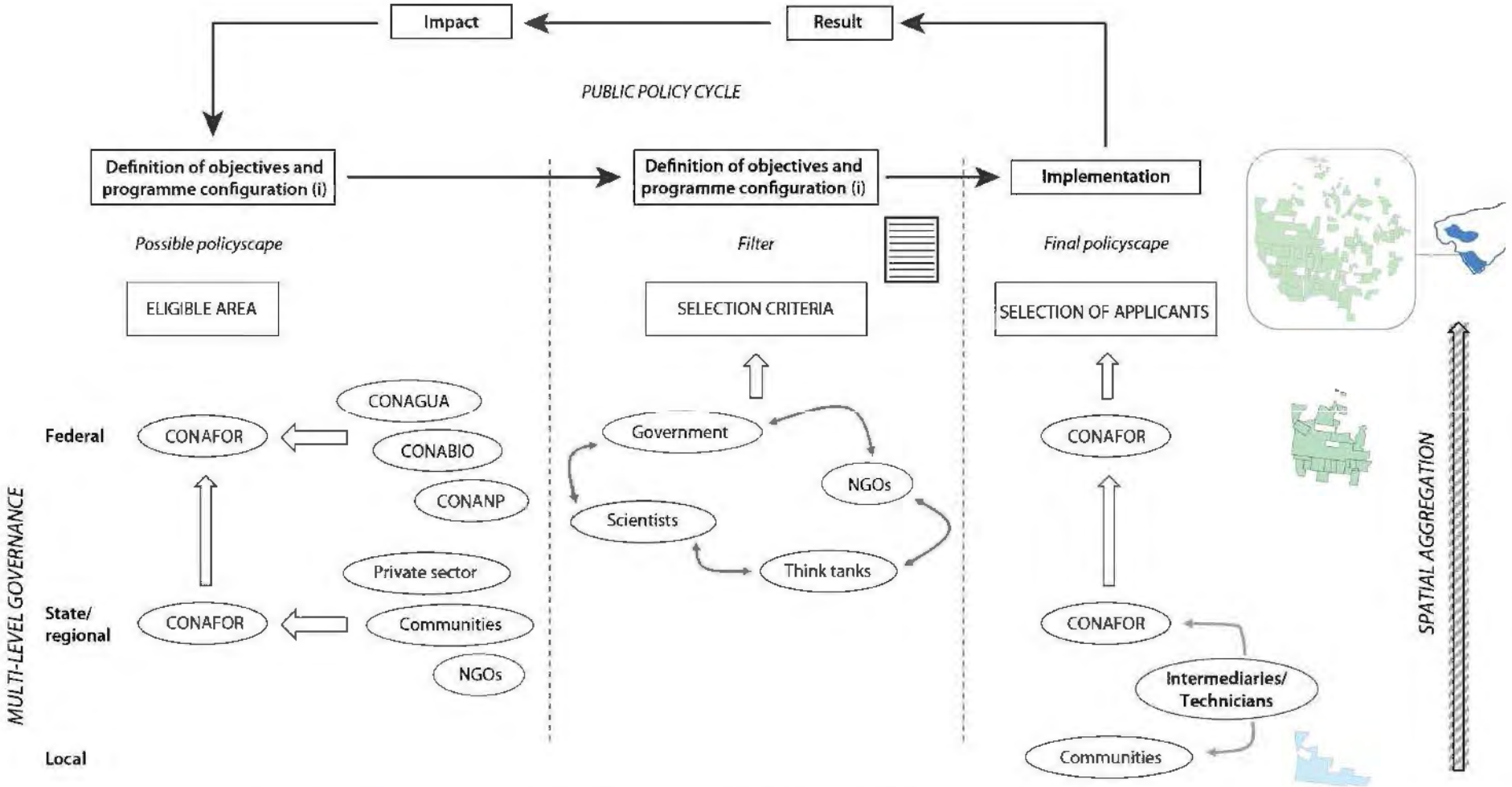

Figure 28.1. The multi-level governance of the national PSA-H programme during the public policy cycle.

Sources: authors, adapted from Primmer *et al.* (2011).

indirectly this rating system influences its positioning. Programmes identified in the survey were: support for traditional maize cultivation (Procampo), for health care of animal herds (Progan), for reforestation and soil restoration activities in forest lands (Procoref), for forest management (Prodefor), the national programme of payments for environmental services (PSA-H) and protected natural areas. The statistical classification by disjoint sets identified three distinct policy-mixes: the first (C1) groups together Prodefor, Procoref and PSA-H, all associated with the national forest support programme (ProArbol); a second group (C2) includes communities in protected natural areas, most of which benefit from the PSA-H; a third group (C3) includes communities benefiting from programmes for support of livestock herds (Progan) and for the restoration of degraded forest lands (Procoref); and the last group (C4) includes communities that only benefit from agricultural support (Procampo), with or without support for livestock husbandry. The agricultural support programme benefits family farming in all communities. The probability of finding a set of forest and environmental policies (C1 and C2) decreases as the risk of deforestation increases (Figure 28.2). In a corresponding manner, agricultural policies are more likely to be implemented when the risk of deforestation increases (C4). Finally, the combination of productive and restoration policies (C3) is less dependent on the risk of deforestation.

Environmental policy-mixes (C1 and C2) are associated with forest territories where these mixes are economically attractive, i.e., with low opportunity costs. This outcome is not only a result of the financial inability to include forests with a high risk of deforestation, but also of the control over selection criteria that accords priority to social and environmental indicators, which are more often associated with forest communities with a reduced risk of deforestation.

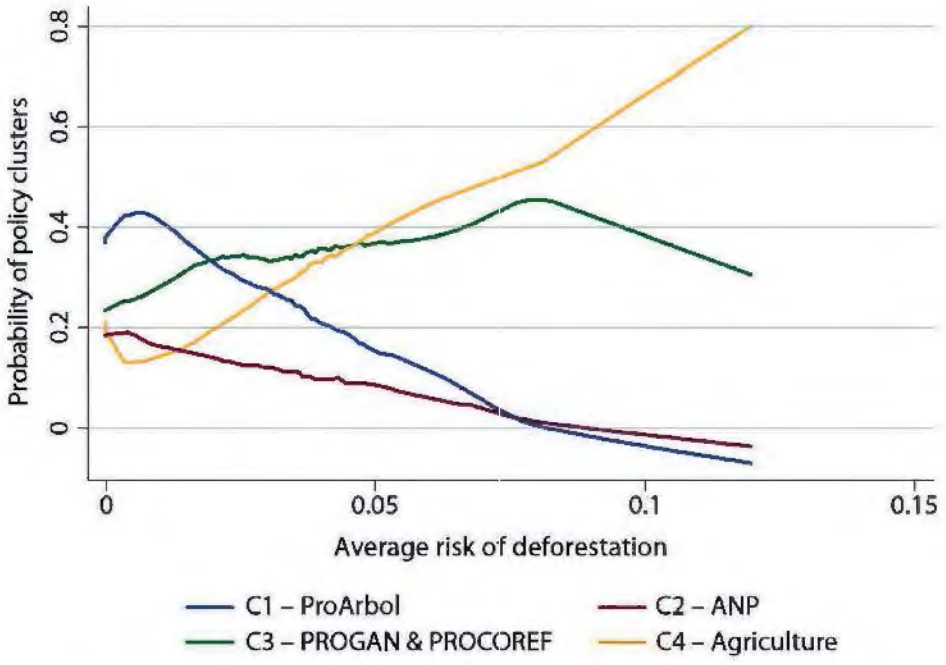

Figure 28.2. Overlapping combinations of forest and agricultural policies as a function of the risk of deforestation.

Sources: authors with data from Ennaf (2011).

The evolution of regional eligible areas and the role of rural technicians

The eligible areas are determined at Conafor's national headquarters on the basis of spatially explicit geophysical data (slope, type of vegetation, hydrology, forest density) and socio-economic data (presence of cities, poverty level, hydraulic infrastructure). These eligible areas must have the approval of other competent governmental commissions, including the National Commissions for Water (Conagua), Biodiversity (Conabio) and Protected Areas (Conanp). These areas have undergone numerous fluctuations resulting from the intersection of many interests. Yucatán and Chiapas States are examples that illustrate these fluctuations which are mainly grouped into three periods (Figure 28.3). In the first period (from 2004 to 2006), the eligible areas were selected on the basis of technical criteria in line with the priorities of the World Bank (proximity of cities for creating markets for environmental services), of Conanp (presence of protected areas) and of Conagua (presence of large forests in aquifer recharge zones). The second period (from 2007 to 2009) was characterized by an expansion of the eligible areas towards poor areas at the urging of the then Mexican President, F. Calderón. Finally, the third period (from 2010 onwards) has seen administrative criteria on the ascendant, driven by pressure from budgetary cuts: areas allocating payments for hydrological services and for biodiversity conservation are being combined under a single call for projects, while areas that made no applications in recent years were eliminated.

And yet, the choice of communities also depends on the strategy of rural technicians, which can partially be perceived by comparing the communities finally selected with those that are eligible. This comparison shows that, for Chiapas State, communities that did roll out PSA-H have more forests, are more frequently associated with protected areas, and have a lower risk of deforestation than unselected but eligible communities. In Yucatán State, the participating communities have lower population densities and tend to be poorer. There is no statistical difference in the deforestation risk.

We compared these results, through interviews with rural technicians of the two States, during feedback and taking-stock workshops of the Pesmix project. In Yucatán, rural technicians are organized mainly in the form of small consultancy firms specializing in rural development. These technicians prefer working with sparsely populated communities that enjoy good governance and large forests that are not threatened by infrastructure projects. In Chiapas, technicians tend to originate mainly from conservation NGOs that are very influential in protected areas where they have historically supported local communities. These two strategies illustrate how the behaviour of rural technicians is oriented not only on minimizing transaction costs (information retrieval and negotiation with the community) (Schomers *et al.*, 2015), but uncertainty factors as well (which can generate unexpected sources of transaction costs) such as social conflicts related to poor programme governance within the community. Ultimately, these targeting and selection processes explain the differences in the characteristics of the communities participating in PSA-H in relation to all eligible communities and their spatial distribution. While communities that have obtained PSA-H are represented throughout the Chiapas State, the communities implementing PSA-H in the Yucatán State are concentrated in the south (Cono Sur region), leading to a

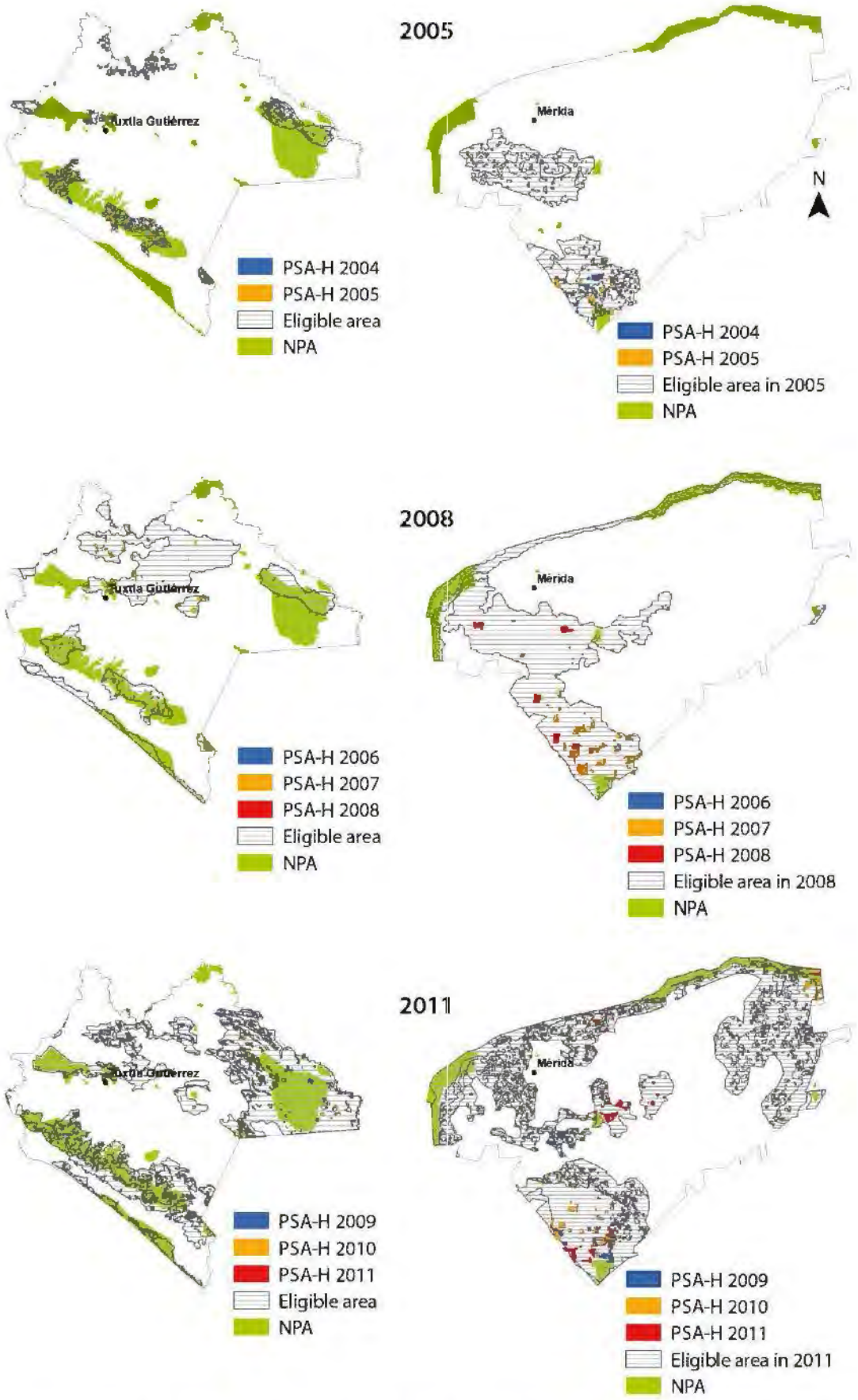

Figure 28.3. Evolution of PSA-H eligible areas (shaded) in Yucatán and Chiapas States.
Sources: authors with Conafor data.

policyscape with a mix of instruments that is quite different from the initial landscape. We should therefore expect the likely impacts of PSA-H programmes – whether or not they are associated with other programmes – to depend on this aspect.

The territory as a witness of and trigger for rural policies

This case study illustrates how the interactions between political and territorial instruments act in both directions: on the one hand, the multi-level governance of PSA-H unites different actors around a series of political objectives, while, on the other hand, the territory's socio-ecological characteristics orient these policies towards specific areas of the territory. Protected forests in the mountains of Chiapas, much like the humid forests of the limestone plains of southern Yucatán, present specific characteristics of agricultural production or their populations that influence the impact of PSA-H and determine the policy mix that is implemented. The PSA-H thus appears to be, just like the conservation and development policies that accompany it, the outcome of a lively and dynamic interaction between the multi-level governance system and the territory, with a constant feedback mechanism at work.

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